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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,227	02/26/2002	Atsushi Abe	JP20010056US2	4748

7590 05/03/2005

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EXAMINER

BANANKHAH, MAJID A

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/083,227	ABE ET AL.	
	Examiner	Art Unit	
	Majid A. Banankhah	2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☒ Claim(s) 5,6,8,9,14,15,17,18,23,24,26 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*[Handwritten mark]*

***DETAILED ACTION***

1. This office action is in response to application filed on February 26, 2002. Claims 1-27 are presented for examination.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Per claims 1, in the second step of the claim, the probability distribution for times at which execution of the first job is formed is determined, however in the second step the second job is executed based on the result of the probability distribution function. In the first step the distribution at which the first job is executed is determined. It is unclear what is included and/or what is excluded by the last step. Claims 10, and 19 are rejected for similar reason. Claims 2-7, 11-17, and 20-25 are rejected for the rejection of their parent claims 1, 10, and 19 respectively.

Additionally, as to claims 8, 17 and 26, the claim recite "wherein the laps of time from the time at which said first job is finished is set as the time start point of said probability distribution" is confusing. The "laps of time" (also recited in claim 5) is a time interval and cannot be considered as the starting time for an event. The starting time (compared to a reference time) is an absolute quantity, while the laps of time is time interval. It appears that the statement

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should read as "wherein the time at which said first job is finished is set as the time start point of said probability distribution". Claim 17 and 26 have similar problem. Claims 9, 18, and 27 are rejected for the rejection of their parent claims 8, 17, and 26 respectively. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 10-11, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson et al. (US Pat. No. 6,557,120, hereafter Nicholson).

As to claims 1, 10, and 19, the reference of Nicholson taught the invention as claimed including, a system for controlling execution timing of jobs, comprising (the system of Nicholson):

job execution means for executing a plurality of jobs, wherein said plurality of jobs includes a first job executed at irregular time intervals and a second job executed at regular time intervals (Fig. 5, and col. 8, line 55-68);

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probability distribution forming means for determining a probability distribution for times at which execution of said first job occurs (col. 10, lines 23-33); and execution timing means for scheduling execution of said second job in accordance with said probability distribution (col. 10, lines 45-60).

The system of Nicholson does not clearly explain the detail of the execution of regular time interval and irregular time intervals. However, the he teaches of the server operation which is interpreted as irregular operation and the probability of its execution is calculated according to Gaussian distribution. The periodic operations are also considered as regular time intervals. Therefore, it would have been obvious for a person ordinary skill in the art at the time the invention was made to use the prediction scheduling method of Nicholson for irregular time intervals to avoid overlapping of operations in order to increase efficiency (see, Nicholson, col. 8, lines 22-36).

As to claims 2, 11, and 20 Nicholson taught the invention as claimed including, wherein the starting point of the probability distribution is set at the time at which said first job has completed execution (col. 1, lines 3-19).

As to claims 4, 13, and 22 the combination of Nicholson and Sumamoto does not clearly explain the detail of distribution function over certain predetermined period. But measuring statistical data over certain period of time is well known in the art as by definition data gathering in a statistical distribution must happen in certain and predetermined amount of time, for the reason

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to be able to study data over certain amount of time and be able to compare data gathered within one period of time with data gathered within another period.

5. Claims 3-4, 12-13, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson et al. (US Pat. No. 6,557,120, hereafter Nicholson) in view of Sumimoto (US Pat. No. 5,522,070, hereafter Sumimoto).

Nicholson taught the invention as however the system of Nicholson does not describe the detail of scheduling system and wherein said probability distribution forming means includes means for determining the probability distribution with respect to time zones, week-day zones and/or seasonal zones, and wherein said execution timing means schedules execution of said second job on the basis of the probability distribution according to the current time, the current day in a week and/or the current season. However, determining the probability distribution and scheduling jobs according to time zone, weekday and/or seasonal zone is well known in the art as it is evidenced by Sumimoto. The reference of Sumimoto teaches of scheduling jobs according to probability distribution based on the breakdown of a host computer and the short term and long term prediction of data (col. 18, lines 8-18, and col. 19, lines 3-16) for the reason to be able to do the job scheduling according to a reference time system and be able to schedule the jobs for short term and long term periods. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the time zone scheduling system of Sumimoto into the extended software reliability system of Nicholson.

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6. Claims 5-6, 8-9, 14-15, 17-18, 23-24, and 26-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Majid A. Banankhah** whose telephone number is (571) 272-3770. The examiner can normally be reached on Monday – Friday, 7:00 AM – 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Meng-Ai An** can be reached on (571) 272-3756.

Any inquiry of a general nature or relating to the status of this application should be directed to the **TC2100 Group** receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Majid Banankhah

4/28/05

  
MAJID BANANKHAH  
PRIMARY EXAMINER